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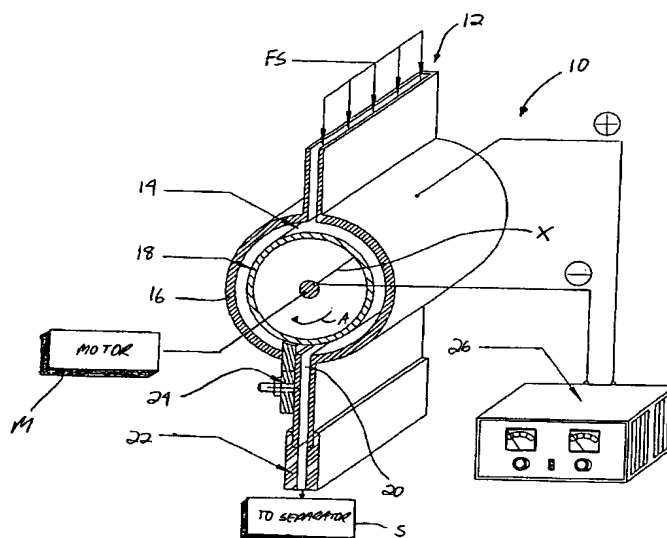
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(54) Title: ELECTROSTATIC PARTICLE CHARGER, ELECTROSTATIC SEPARATION SYSTEM, AND RELATED METHODS



(57) Abstract: In one aspect of the invention, a charger for use in a system for separating particles from a fluid flow is disclosed. In one embodiment, the charger comprises a body including an inlet for receiving the particles, a chamber in which the particles are received, and an outlet for discharging the particles. A rotor having a generally non-permeable surface is positioned in the chamber and rotated for contacting and charging the particles. In another aspect of the invention, grid electrodes with elongated fingers are proposed for use in a novel separation system. Related methods of charging and separating particles are also disclosed.